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ABSTRACT

Focusing on the issue of writing across the curriculum, this bulletin includes papers presented at the 1986 Annual Composition Conference. In his introduction, Isaiah Smithson describes writing across the curriculum as a "subversive" activity in that it entails a radical shift in the way teachers teach and learners learn. Toby Fulwiler elaborates on writing across the curriculum as a source of profound pedagogical change and advocates using this pedagogy to effect a "transfer of power" from the teacher to the learner, thereby creating a student-centered curriculum. Stephen A. Bernhardt, Genelle Bedokis, Linda Stevens, Barbara Wilson, and Suzanne Ludwig describe two extensive writing projects, developed at writing-across-the-curriculum summer institutes, that incorporate writing assignments involving students in research within several disciplines. Bradley Hughes calls for encouraging writing across the curriculum by redefining and expanding the role of the writing center. Ron Fortune describes a method for interweaving the teaching of writing and literature by concentrating on students' and teachers' creative processes. Lela M. Detoye explains why writing is such an effective learning tool and discusses how students transfer knowledge and procedures from one learning situation to another. Finally, Susan Gabriel and Donna Singleton provide a brief bibliography of writing across the curriculum that addresses writing as process, general theory, faculty workshops, writing labs, and practical applications. (JD)

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WRITING ACROSS THE CURRICULUM

ILLINOIS ENGLISH BULLETIN

ILLINOIS ASSOCIATION OF TEACHERS OF ENGLISH

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About This Issue

The 1986 Southern Illinois University at Edwardsville Annual Composition Conference had as its theme writing across the curriculum. Linda Barnes and Donna Singleton, of SIUE, were its organizers, and Toby Fulwiler, of the University of Vermont, was the keynote speaker. All of the following essays focus on writing across the curriculum, and most of them are revisions of papers presented at the Conference. They provide elaborations of the philosophy, methods, and import of writing across the curriculum.

Fulwiler is one of America's best known apologists for, theoreticians of, and practitioners of writing across the curriculum. He doesn't use the word "subversive" in his article, but he does elaborate writing across the curriculum as a source of profound pedagogical change. He says, "The movement known as 'writing across the curriculum' has emerged at secondary schools and colleges to change the attitudes of both students and teachers about the role of language in the total school curriculum." He says that "revolutionary things begin to happen" when the pedagogy of writing across the curriculum is instituted. Fulwiler advocates using writing pedagogy to effect a "transfer of power" from the teacher to the learner and to create a "student-centered curriculum." His article, "Writing and the Alternative Curriculum," explains why the transfer is needed and describes some of the elements of the "alternative curriculum."

The three articles following Fulwiler's don't contain the term "subversive" either, but they do provide various strategies for subverting present ways of teaching and learning; they offer practical means of implementing the "alternative curriculum." The article by Stephen Bernhardt, Genelle Bedokis, Linda Stevens, Barbara Wilson, and Suzanne Ludwig presents two extensive writing projects developed at writing-across-the-curriculum summer institutes held at Southern Illinois University at Carbondale. These "Exemplary Projects from the Illinois Humanities Council's Summer Institutes for Secondary Teachers" have been integrated into high school and junior high school curricula. They incorporate a variety of writing assignments, involve students in research within several disciplines, and transfer power from teachers to students.

Bradley Hughes' essay, "Reaching Across the Curriculum with a Writing Center," presents another approach to implementing writing across the curriculum. Writing centers have been quietly resisting the dominant pedagogy for years. Thousands of high school and college students have slipped out of their regular classrooms, gone to the writing lab, and been encouraged in small groups and conferences to prewrite, redraft, and reconceptualize. In the writing center, the student is active and the teacher is a facilitator — the focus is on the individual student's needs. Hughes calls for spreading writing across the curriculum throughout the school by redefining the writing center and expanding its role. He feels that by

"breaking free from narrow, prescriptive roles, writing centers benefit everyone in a school or college — students and faculty in all disciplines." Relying on his experience as Director of the Writing Lab at the University of Wisconsin at Madison, Hughes offers several practical steps for effecting this expansion, steps that can be carried out in both high schools and colleges.

The third article providing strategies for incorporating writing into all disciplines is directed to literature teachers. Oddly, English teachers are as likely to overlook writing as a means of learning as are teachers in other disciplines. Ron Fortune's "The Creative Process in Literature: A Basis for Connecting Writing and Literary Studies" describes a method for interweaving the teaching of writing and literature. His essay offers an innovative means for bringing writing across the curriculum back to the English class and for lessening the rift between teaching literature and teaching writing. Both students and professional writers go through writing processes. Students who work with their own drafts and who, at the same time, study professional writers' drafts — journals, letters, and versions of a poem or story — learn a great deal about their and other people's writing and thinking processes. Fortune's essay explains how to integrate the teaching of writing and literature by concentrating on students' and professionals' creative processes.

All three of the articles describing practical ways to implement writing across the curriculum, as well as Fulwiler's article and my introduction, refer to writing as a means of learning. Writing's pedagogical value, after all, is the core of writing across the curriculum. Lela Detoye's essay "Using Writing to Develop Metacognitive Skills," explains *why* writing is such an effective learning tool. Detoye discusses how students transfer knowledge and procedures from one learning situation to another, that is, how they use present understanding and skills to acquire new information. She focuses on the role of language and writing in effecting this transfer, and she explains how teachers can use writing to help their students incorporate information as they move from one learning situation to another. Detoye's is probably the most theoretical essay in the collection; as such, it provides the underpinning for much of what is said in preceding essays.

Finally, Susan Gabriel and Donna Singleton have provided a brief bibliography of writing across the curriculum. They realize that teachers don't have leisure to read haphazardly through dozens of works on a subject, rejecting the many that are mediocre and discovering the few that are valuable. Therefore, they have gathered and conveniently classified what they perceive to be the most useful books and articles on writing across the curriculum. For teachers who read a few or all of the essays included in the present collection and who think they would like to learn more about "transfer of power," the "student-centered curriculum," and subversive pedagogy, Gabriel and Singleton provide reliable guidance.

Isaiah Smithson
Guest Editor

Introduction: Writing as a Subversive Activity

Isaiah Smithson
Southern Illinois University
Edwardsville

When I conduct a writing-across-the-curriculum workshop, I feel a little guilty in the beginning. If the workshop is for middle or high school teachers, I'm in the company of teachers of math, science, history, English, and other subjects. If it's a college-level workshop, I'm surrounded by agronomy, nursing, elementary education, engineering, finance, and music professors. In spite of their diverse levels and backgrounds, most participants share an enthusiasm for what they perceive to be writing across the curriculum; only a few are skeptical. Most of the teachers who attend writing-across-the-curriculum workshops already use some writing to teach their varied subjects; they have seen that using writing is a sound method of teaching; and they expect to pick up more writing devices they can incorporate into their syllabi. I feel guilty when I first face these teachers because they are deceived, and I am involved in their deception. The aim of writing across the curriculum is not to add a few writing assignments to their syllabi. The aim of writing across the curriculum is to change the ways many teachers teach and students learn. The aim of writing across the curriculum is to subvert the present educational system. By the end of the workshop, the participants will understand that writing across the curriculum is a subversive activity — most of them will slowly have become fellow conspirators as they grasp the philosophy, methods, and import of writing across the curriculum. In the beginning, though, there is no way for me to disabuse participants of their misperception or tell them to what ideals the workshop will lead them.

The philosophy and methods of writing across the curriculum seem innocent enough. The philosophy is simple. Writing is an effective means of learning any subject: students who write about a subject learn about a subject. If students write in all of their classes, not only in their English classes, they learn readily and they gain increased practice in writing. In addition, the work they do in their writing classes no longer seems isolated; it is valued as a learning tool. Thus, students are better motivated in their English classes and better taught in their non-English classes. Students and teachers participate in a coherent curriculum, one in

which writing and learning are inseparable across the curriculum.

The methods of writing across the curriculum are those of the writing-as-process approach. Writing across the curriculum consists of exporting the English class's writing-as-process approach to all disciplines. Writing teachers have learned that pedagogy concentrating on the student's process of writing is more effective than pedagogy focusing on the written product resulting from that process. Writing-as-process pedagogy encourages students to prewrite — to explore subject and form with writing that is unfettered, ungraded, and experimental. It also encourages students to write draft after draft, submitting some of them to peer groups or teachers for advice, as a means of refining ideas and expression. Thus, in writing-across-the-curriculum workshops, teachers are taught several prewriting methods, techniques for developing students' audience-awareness, approaches to organization and revision, collaborative learning strategies, and different types of evaluation. Teachers are taught to design assignments whose audience, purpose, steps to completion, and criteria of evaluation permit students to learn draft-by-draft. Their students, as a result, will be led to value and exploit the writing process that leads to the written product. These students will come to realize that all writers engage in a writing process, some phases of which are shared by most writers, others of which are idiosyncratic. Therefore, they won't expect to create a polished product in one draft; they will expect to think, guess right and wrong, and rethink in prose. By exporting writing-as-process methods, writing across the curriculum allows students to learn through their writing in all of their classes.

It is the import of the philosophy and methods of writing across the curriculum that is subversive. Once teachers begin to practice writing-across-the-curriculum principles in their classrooms, profound changes occur. Teachers use the writing process to teach, instead of merely using the written product to evaluate. In doing so, teachers usually find themselves encouraging a greater quantity of personal writing than they have called for in the past. Before students construct the final product intended for an audience, they need to be allowed to prewrite about their subject in a personal way — in journals, or in free writing, or in a series of random notes that won't be graded. They need to explore a subject's meaning for them, determine how the subject's new information connects with ideas they are already familiar with, before they are ready to present their newly integrated ideas to an audience. This emphasis on what James Britton calls "expressive" writing as a necessary prelude to the "transactional" writing intended for an

audience often makes teachers uncomfortable at first. Many teachers are used to devoting most of the time to a final product; they aren't used to allowing a great deal of ungraded ruminating. However, this emphasis is vital. If students are to understand, instead of just memorize, they require a means of connecting new information with old; prewriting allows them to construct the necessary bridges between the familiar and unfamiliar.

Not only do writing-across-the-curriculum teachers emphasize the prewriting that precedes the final product, they also evaluate the final product differently. Since their focus is on writing as a means of learning, when they evaluate written work they concern themselves more with quality of thought and expression than with surface correctness. A comma splice, a misspelled word, or a mistake in agreement is noted, but it isn't given the evaluative weight of an idea misconstrued or poorly expressed. Teachers trained in writing across the curriculum attend far more to the students' complicated rhetorical choices than to surface correctness. The writing process consists of countless choices of ideas, organization and development patterns, sentence constructions, and precise words; it also includes observance of usage and mechanics conventions. Teachers involved in writing across the curriculum see the more sophisticated choices — having to do with complexity of thought and clarity of explanation — as better indicators of what a student has learned than are misplaced commas or confusions of "who" and "whom." Usage and mechanics are seen as important, but the more comprehensive rhetorical choices are seen as more important. For teachers to whom evaluation is largely a matter of checking students' prose for surface correctness, this shift in priority, in values, is sometimes unsettling.

The most subversive implication of writing across the curriculum is the students' shift from passivity to activity that is effected by the writing-as-process approach. In writing as process and, therefore, in writing across the curriculum, students are constantly active. In drafting, in peer group sessions, and in conferences with teachers, students are constantly making rhetorical choices. They spend less time listening to teachers telling them what they ought to learn and how they ought to write, and more time learning through writing. Students may not acquire information so quickly or neatly when they learn through prewriting or peer group exchange instead of through listening to a teacher standing in front of the room. However, they learn more thoroughly. Because they are active, they discover information for themselves, they make their own connections, and they assign their own value to specific facts and ideas. Of course, as students

become more active in acquiring their education, the teacher's role is changed. Instead of being the center of attention and having a secure command of all classroom activity, the teacher becomes a facilitator, a resource person, a well-informed guide, and a catalyst. He or she gives up the secure post at the front of the room and circulates among the students. Students learn better when they are active. However, students often require that teachers move over and allow them room for their activity.

As I've said, I feel only a little guilty when I first begin a writing-across-the-curriculum workshop. I realize the deception is not my fault. I can explain the philosophy, methods, and import of writing across the curriculum during the first minutes or hours, but it does little good. At this point, the participants are merely critical listeners. Only as the workshop progresses, only as the teachers have the opportunity to practice writing-across-the curriculum principles, do they begin to change their attitudes and to grasp how different is this approach from the ones most of them have been using. It is not my fault that people must live with and practice ideas in order fully to grasp them. Also, my guilt is mitigated because I'm dealing with professionals. Teachers who attend writing-across-the-curriculum workshops are quite capable of analyzing what we talk about and experience as our workshop develops. In time they will be able to determine for themselves whether they, too, wish to subvert the present system. And most of them are enough dissatisfied with their present methods that they are willing to experiment with writing across the curriculum in their classrooms. In fact, most teachers return to their classrooms reinvigorated by the new approach.

Finally, I applaud the subversion embodied in writing across the curriculum. I respect a pedagogy that insists that information that hasn't become meaningful to a student is not actually knowledge, only disconnected, memorized items. And I respect a pedagogy that forces students to be active. I realize that learning through writing takes time — more time is required to allow students to write themselves into understanding than is required for a teacher to stand in the front of the room and explain items. However, I think the quality of the learning done is more important than the quantity of ideas and facts considered. So, my guilt is mostly assuaged, and I accept that I cannot adequately warn workshop participants against the set of values that the workshop is likely to create. I leave it to the participants to confront their own subversive tendencies, as I have mine.

Writing and the Alternative Curriculum

Toby Fulwiler
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The Paradox

When children enter first grade, they want to learn to read and write. In fact, according to Donald Graves, of the University of New Hampshire, most have actually begun to write on their own, before they have learned to read. But many of these same students, by the time they enter my college freshman English class, have stopped writing. They don't like to write, don't write often, and don't think they do it well. What has happened between first grade and twelfth?

Last year, on the first meeting of my freshman English class, I asked my students to tell me why they thought writing was hard. I asked them to write anonymously for no more than 15 minutes on this question, after which I collected the answers and took them home to read. I was interested in what these papers revealed about both student skills and attitudes as writers. Here is one fairly typical answer:

> Writing is hard because I have trouble getting my thoughts together. For me, in most cases, I am writing because I have to, not because I want to. In a way writing is kind of intimidating — the paper just sits there — I'm usually writing for a grade; it puts on more pressure.
>
> Most of the time people communicate through talking. Talking is more natural. You can read the other people's expression, it's easier to sense if you're right or wrong. It just seems that writing is more formal — punctuation, spelling, proper words. Getting that opening line is so hard.

It doesn't take long to see a small paradox in this piece: On the one hand, the statement is articulate, comprehensive, and thoughtful, as the writer describes how difficult it is getting his "thoughts together" and how much more demanding writing is than "talking" — comments many of us would agree with. On the other hand, the statement reveals an attitude toward writing which is almost totally negative, as this student writes only when he or she "has to" and "usually . . . for a grade," and otherwise spends time talking, which is "more natural."

I reprint this particular response, quite simply, because it is a common variation of a theme repeated many times in this assignment. In fact, with one exception, I could have reprinted any of the twenty-four responses to my question and demonstrated essen-

tially the same paradox. One writer actually wrote, in lucid prose, "I can't write because. . . ." In other words, all of my freshmen could write, many fairly well, but they didn't believe they could.

This paradox is especially disturbing given that most of these students took college preparatory curricula in high school and enrolled in a fairly selective school, the University of Vermont. What about the students of lesser ability who will never seek further education at all?

School Writing

The whole school curriculum teaches lessons about writing, some quite unintentional. As students move from year to year, subject to subject, they learn what writing is for, whom it's for, and what it's supposed to look like. Though English teachers may feel most of the pressure to improve student writing, many of the lessons are out of their hands. Since writing, along with reading, is central to learned and literate behavior, how is it that many of the best American students arrive in college with such a poor attitude toward it, doing it only when they have to, avoiding it most of the time? Let's look at some possible reasons:

First, in most parts of the K-12 curriculum (continuing in college, of course), students learn to write for a single audience, the teacher, and so experience little of the pleasure that comes from writing to real and varied audiences. Outside of school, when they do communicate to real audiences — friends, family, employers — they most often do so orally, in person or via telephone. Communicating with real audiences takes place in talk, not writing, Can anything be done to bridge this difference?

Second, most of the time when students do write in their classes it is for a single purpose — to be measured. Teachers assign writing to find out how much students know and evaluate them accordingly. In 1980, Stanford professor Arthur Applebee surveyed two hundred American high schools to find out what kind of writing students were being asked to do throughout the curriculum, in all subject areas. He found that most writing assignments actually fit into one of two categories: students wrote to be graded or kept busy. We might ask what effect such assignments have on student interest in writing?

Third, students believe there is essentially one kind of "good writing," something like Walter Cronkite English written down. Many composition handbooks, in both high school and college, contain formulaic rules for producing good writing: use active verbs, avoid passive constructions, start each paragraph with a topic sentence, don't use contractions — the list goes on and on.

While these suggestions make good sense sometimes, other times they may not. Should one really construct a letter to mom, a memo to the boss, and a term paper according to the same rules? If not, what should we teach about "good writing"?

Fourth, students also believe that good writers are gifted, that those of us who write competent prose in the course of our adult lives have a genius or gift that they, mere students, do not possess. How else, they wonder, do adult writers gain the confidence to write and publish and be understood? Why, they wonder, are some people naturally good writers and some not?

Fifth, freshmen arrive in college believing that writing is the business of English teachers and no one else — not history, biology, nor business teachers. Students seem to understand that they must write clear and careful papers in their writing and literature classes, but outside of English classes it's anarchy and anything (apparently) goes. At what point in the curriculum did written language become the sole property of a single academic department?

Language at the Center

When people talk about what's basic to the school curriculum, they talk about reading, writing, and arithmetic. In other words, the Three R's at the center of learning all have to do with language — systems of words and numbers — without which symbolic thought, as we know it, is impossible. Schools at least pay lip service to the value of language learning because, in a democratic society, schools must teach citizens to think — critically, creatively, and independently. And central to the Three R's is writing, the mode of language perhaps most abused and least understood by teachers, administrators, parents, and students alike.

If we are really concerned with student writing ability, we have to find alternate models from which to reconstruct the role of writing in the curriculum. For useful models, we don't have to look far. Consider, for example, the role of writing in the work and play of those of us who are literate adults: We write to extend and elaborate our thoughts, to find things out, to raise questions, to aid our memories, to discover new ideas, to create legal records, to document our lives, to vent our anger, to communicate for all sorts of reasons with friends and enemies alike, and for fun. Writing is a basic part of our everyday life; shouldn't it be the same in school?

Students at the Center

I mentioned that when I looked at the writing samples my students produced that first day in class, 23 of 24 were practically

interchangeable. But one was different, not so much in skill as in attitude:

> Where to begin, what to say? Writing feels very personal to me. I usually write when I'm under pressure or really bothered by something. Writing down these thoughts takes them out of my mind and into a concrete form that I can look at. Once on paper most of my thoughts make more sense & I can be more objective about them. Puts things in their true perspective.
>
> But, at the same time that I'm writing, I'm worrying about what another person's reaction would be to my words. I write a lot of things I wouldn't say, and it's scary to think of someone seeing so far inside of me by reading what I've written.
>
> A lot of what I'm thinking is in emotions, colors, & pictures — things that don't seem to have names so it's hard to capture these accurately. I get so frustrated when what I've written isn't a photograph of what I'm thinking.

I know who wrote this piece because Joan signed her name. She writes about writing from a different perspective than her classmates. She admits writing is hard because trying to translate "emotions, colors & pictures" to paper is hard — some of the same reasons most of us would add. And she admits "it's scary to think of someone seeing so far inside of me by reading what I've written." Yes, it is — again something adult writers might have said. But the key difference between her statement and the twenty-three others in class lies in why she writes in the first place — for herself. Joan doesn't view writing as something only done in school and only at the teacher's request. Nor does she spend any time worrying about the rules of spelling or usage or grammar or other matters of correctness that so many students have learned to associate with the act of writing. Joan makes a radical statement within the context of my class, because she understands that writing is a powerful tool for her own self-discovery and expression.

The Alternative Curriculum

Language skills do not exist in a vacuum. Good writers need more than sound linguistic and conceptual skills; they also need to believe in themselves and in what they have to say. Serious writing involves one's inner motivation as well as one's attitude toward language, teacher, school, and society. Even good thinkers can generate bad writing if certain conditions obtain: if they believe the writing serves no real purpose; if they believe normal adult human beings do not write; if they believe no one wants to read what they have written; if they believe mechanical correctness is valued above intellectual content; if they believe the standards for good writing are arbitrary and capricious; if they be-

lieve it serves the system and not themselves; and if they are taught to fear doing it.

Language use is the absolute key to the student-centered curriculum. Teachers who ask students to write often and who read and respond seriously to what students have to say give over substantial amounts of power to their students, power that comes from confident voices. (But I am very much aware as I write this that these noble sounding phrases have been uttered by others before me, from John Dewey and A. S. Neill to John Holt and Paulo Friere. Apparently, however, they need to be uttered again. I will try to make this utterance as brief and specific as I can.)

The movement known as "writing across the curriculum" has emerged at secondary schools and colleges to change the attitudes of both students and teachers about the role of language in the total school curriculum. If you will consider again the list of destructive and paradoxical beliefs with which I began this piece, I will try to suggest some positive remedies applicable to any subject or grade level:

First, in every classroom there exist audiences other than the teacher for whom students can write: to each other by sharing drafts of papers; to themselves in journals, diaries, logs, and notebooks; for publication in school, local, and national media; and to real other people outside the classroom who might care what they have to say and from whom they might receive responses. Such audiences must be real, the communication genuine, and the responses prompt. Varying the audience to whom students write validates writing as an authentic mode of communication. It also helps students learn to think beyond themselves as they try to anticipate their audiences' needs and questions.

Second, students can write for many reasons in any course of study, only a few of which need be evaluative. For instance, if we simply recall the way Joan used writing, to figure things out for herself, we might suggest that teachers could assign writing in a similar way in any course where thinking, speculating, or solving problems was important. I ask my literature students to figure out *Moby Dick* by doing extensive journal writing; I know a math teacher who asks his students to figure out problems in "workbooks" for precisely the same reason. The key to making this kind of informal, non-graded writing work is to make use of it regularly in class, asking students to read their observations aloud in class, with the teacher also participating in both the writing and the sharing of the writing. The rewards for doing so are the opportunity for students to rehearse their thoughts before being

asked to speak and the improved quality of their ensuing discussion, which is always better once talkers have had a chance to be writers first.

Third, to show students that there is more than one kind of good English, teachers need to start introducing more than one type of written language into the canon of their course reading and writing assignments. Readings can be found in every discipline which validate a variety of writing modes and styles, such as Darwin's rough notes, C. Wright Mills' journal, copies of actual technical reports, etc. In addition, some class time might be spent looking at samples of good though informal student writing from notebooks, journals, letters, and rough drafts. It makes no sense to train sophomores in an elective class to write like sociology or history graduate students — no sense for the writer (the student) of such prose and no sense for the reader (the teacher), as both suffer needlessly.

Fourth, and easiest of all, one can show quickly that good writing is more often born of sweat than genius. To do so, I make overhead projection transparencies of early drafts of my own writing and share these with the class along with the finished product which was eventually published. Students quickly see that the finished piece is "good" only because it is the seventeenth draft. It would help students in many disciplines to see the rough work their teacher or textbook writer began with. Students need to learn that while good writing is hard work, it is also rewarding and that there are strategies that reduce the labor (a good word processor or a critical reading by a close friend, for instance). Students need to learn these strategies for effective composing from both their writing teachers and their other instructors, if only to learn that consistency does exist somewhere in the academy.

Fifth, students will learn that writing is everybody's business only when teachers in all disciplines begin to use writing to help students as well as to judge them. Students expect me, an English teacher, to be concerned with good writing, but they need to discover that the rest of the world cares too — as when biology teachers insist that lab reports be carefully written and coherently discussed; when math teachers pay attention to verbal explanations of numerical problems; when history teachers read and comment on early drafts of student papers; and when physical education teachers share their personal running logs.

There is one additional point I would make: none of the practices suggested above — or others like them — will make much difference in isolation. But when a teacher begins to employ a

number of writing/talking activities in his or her class, revolutionary things begin to happen. For example, every time a teacher asks students to read in class from a journal entry, that teacher removes himself or herself from the center of attention and shifts responsibility toward the student learners, where I think it belongs. As students read their own writing aloud and test their beliefs in the public arena of the classroom, their concerns and opinions are entered into the business of the course itself — and the learning therein is forever altered, if ever so slightly. If later in the same course students bring rough drafts of papers and spend some class time critiquing each other's, the teacher is again giving up authority as the sole arbiter of right and wrong, giving over still more class time to the students' own voices — which is the essence of the alternative curriculum. Writing is the key that effects this transfer of power, because writing allows learners to try out their voices, to give and receive criticism, and to engage in issues that affect them personally. The teacher's role in all this? To make open-ended, flexible assignments and to be willing to listen to the results.

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Writing Across the Curriculum: Exemplary Projects from the Illinois Humanities Council's Summer Institutes for Secondary School Teachers

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Carbondale

For those who work in our schools, the real power of writing across the curriculum is seen in actual projects carried out in classroom settings. Cross disciplinary writing projects can revitalize teachers and students by causing them to work together in new ways. When things go right, everyone gets into the action: students, teachers, parents, administrators, and the community. The result can be newly discovered energy in a team approach based on the recognition that everyone benefits when students use writing as a learning tool in all their subjects.

Over the past two summers at Southern Illinois University-Carbondale, the Illinois Humanities Council, together with the National Endowment for the Humanities and SIU-C, have sponsored summer institutes for secondary school teachers. These institutes have brought together teachers of math, science, social studies and English in intensive two-week workshops to explore the uses of writing across the curriculum. The institutes have been planned in consultation with secondary school teachers, and a secondary English teacher, Gregory Johnson of Carbondale Community High School, has worked with Stephen Bernhardt and Bruce Appleby of SIU as a co-leader throughout the projects. The participants discussed articles on theory and practice, looked at research which describes the actual uses of writing in our public schools, practiced writing and peer editing themselves, and gave each other ideas about how to incorporate more writing into courses.

One of the most important outcomes of the institutes has been cross-disciplinary projects which the teachers implement upon return to their schools in the fall. Listed below are just a few of the many innovative projects undertaken by the teachers:

* Melissa Felling, an English teacher at Edwards County High School, had students interview teachers around the school as part of a classroom publication of a freshman orientation booklet.

* Carolyn Baltimore, a social studies teacher at North Gallatin Community High School, used short reaction/response writings on a daily basis and saw test averages go up on the unit tests she had been using for several years.

* Don Rich, a physics teacher at Centralia High School, has adopted a process approach to preparing lab reports as well as using learning logs on a regular basis, a practice which has given him insight into the "astonishing questions that I never knew existed in kid's heads."

* Tom May, an earth science teacher at Red Bud High School, applied for and received a Chapter II grant which allowed him to bring in professional science writers to describe how they write. He also used some of the money to provide students with computing materials and access to the Dow Jones Retrieval System so his students could gather on-line data for reports.

* Dale Goldsmith, a social studies teacher at Cahokia High School, completely revised a unit on how a bill becomes a law to include writing to legislators, the governor, and newspaper editors, with students role-playing the various people involved in the process as a prewriting activity.

* Larry Rauch, a biology teacher at O'Fallon High School, has involved the rest of his department in multiple uses of writing, including notebooks, career reports, field trip reports, opinion papers, book reports, essay contests, and essay exams.

In every case, the teachers are enthusiastic about their results, seeing increased student involvement, improved learning and retention, and better attitudes among both students and faculty.

We would like to describe below two particularly successful projects in some detail. Both projects have garnered the widespread support of not only teachers and students, but also administrators, parents, and community members. Both projects have been successful beyond the expectations of the planners, and both will continue to be a part of the curriculum in the schools.

Coal Mining Across the Curriculum

GENELLE BEDOKIS AND LINDA STEVENS
FRANKFORT COMMUNITY HIGH SCHOOL
WEST FRANKFORT

Throughout its history, the main industry of West Frankfort has been coal mining. The majority of students come from backgrounds connected with mining, and many students have tended in the past to go to the mines for employment. Even in the present day, when the industry is depressed, it continues to influence many aspects of life in this area. In spite of the centrality of mining in the lives of West Frankfort residents, there has been little attention given to coal mining in the curriculum. The three of us who developed this project, Genelle Bedokis (librarian and English teacher), Linda Stevens (math and science), and Larry DeMattei (social studies), decided to implement a writing project involving the whole school in the study of this important and timely topic. Our main intention has been to encourage writing across the curriculum by involving as many teachers and classes as possible. By the end of the first year (1985-86), we hope to have produced various kinds of writing detailing the social, economic, and environmental impact of coal mining in Southern Illinois. We also hope to produce multi-media presentations on mining to accompany the written materials.

Rationale

Our rationale is three-fold. In the first place, we simply feel that a subject as important locally as coal mining deserves a place in our curriculum. We also feel it is important for students to have the opportunity to explore new areas of learning and to organize their information for presentation in a variety of ways. Our last reason is perhaps the most important but most frequently overlooked: we believe it is important for students to have the chance to present what they learn to the community in interesting, creative ways.

In every phase of our project, students of diverse subjects have the chance to use writing as a learning tool. We believe with R. Baird Shuman that "Benefits will accrue to any school that undertakes a school-wide writing program. Students will gain in understanding their subjects and will develop deeper perceptions when they are encouraged to write about what they are thinking" (57). We encourage a process approach throughout, similar to the model suggested by R. D. Walshe, moving from experience or

questioning, to pre-writing preparation, to drafting, editing and rewriting, to publishing, and ending with response (51-56). We would like students to be talking throughout the project, since we believe with Toby Fulwiler that "Talking refines, shapes, and generates thought" (21). Following Fulwiler's advice, it has been our goal to get students talking with one another, to share their work, and to learn to value their writing more by becoming more sensitive critics of each other.

We also consider it important for students to write in a variety of subject areas for a variety of real audiences — different audiences than students are accustomed to addressing. Here again, we are following the thinking of Fulwiler, who believes that writing for real audiences will help prepare students for the real world. This sort of project lends itself to community involvement, since much of the information gathered will come from community sources. We hope to make the information useful to community members and to gather their reactions as one form of evaluation for the students. Our recent North Central evaluation criticized the lack of school-community relations, and we have viewed this project as one path toward better relations.

Activities

In the article "Writing as Learning through the Curriculum," Knoblauch and Brannon state that giving students directions that are too limited "elicits, not an open-ended investigative dialogue between writer and teacher-reader leading to new learning, but rather a teacher-centered evaluation of how close the writer has come to telling 'the truth' about some subject" ("Writing as Learning Through the Curriculum," 469). In order to create more open-ended learning, we intentionally gave only suggestions of possible topics and activities. We presumed that each of these topics might be covered in a thorough study of coal mining in Southern Illinois. However, we felt that once the students brought their own experiences into the project and began researching the topics, they would find that our suggestions were only a starting point for their work. Having expressed this attitude at the outset, we suggested the following:

Suggested Activities:

— interviews (with mine officials, miners, and families, retired miners, union officials, subsidence victims, insurance agents, scientists, politicians)
— video presentations with script
— slide presentations with script

— letters soliciting information and cooperation (to coal companies, the union, politicians, the Coal Museum Committee)
— preparation of graphs, tables, maps, charts
— presentation at the Old King Coal Festival
— publication of brochure
— field trips with notes or reports
— drawings, photo-essays, or models
— simulation and role-playing activities
— newspaper articles
— written reports
— in-service presentations
— surveys
— debates

Suggested Topics:

— history and development of mining
— mine safety
— unions
— acid rain
— longwall mining
— strip mining
— mine disasters
— mine technology
— ecology and reclamation
— sociology of mining
— economics
— coal gasification
— career opportunities
— current research (especially at SIU-C)

Suggested Materials:

Videotape, photography, books, periodicals, microcomputers, films and filmstrips, government documents, industry documents

No matter what specific projects are pursued by students, our aim is to integrate language skills with content area exploration.

Progress to Date

We found our school and community extremely receptive to our writing across the curriculum project. We gained immediate support from our principal, and when we presented our plan to our faculty, we had enthusiastic support from many of our teachers, with approximately a third of them voluntarily joining us on the

project. We are also enjoying the attention of several state legislators, who have lent their support to the project: Congressman Ken Gray, State Senator Glenn Poshard, and State Attorney General Neil Hartigan. Additionally, the mining companies as well as the unions have been extremely cooperative, both in allowing students opportunities for on-site learning and in providing support for the project in other ways. Old Ben Coal Company, for example, has asked us to submit a grant proposal. (All we need to do is find the time to write it!) To promote our project, we have spoken to the Rotary Club, written up the project for the school and local newspapers, and described our activities on the radio.

One example of this year's activities is a microbiology class which took a field trip to the Coal Research Laboratory and visited another lab of a faculty microbiologist at SIU-C. The students then wrote either a journalistic style article or an essay on the relation of sulfur to coal, relying on their notes from observation and interviews. In a low track sociology class, the students have been interviewing coal miners about the special terms used in the industry. They are now compiling a dictionary of specialized terms, which will be expanded upon by next year's class and then published and circulated. In a photography class, the students have been making a slide presentation of idle mines in the area, while home economics students are researching and writing about the problems and roles of women miners.

We feel we are off to a good start. Our plan is to continue involving more teachers in the project and to keep in mind our goals of producing interesting, creative materials which can be presented at the yearly Old King Coal Festival or shared with miners and community members. It has taken a lot of energy and not everything has gone smoothly, but we are still committed to our goals and hope to see continued involvement throughout the coming year. The project already has had positive effects on student and faculty attitudes, and we are optimistic about further benefits to come.

The Year of India

Barbara Wilson and Suzanne Ludwig
Casey Junior High School
Mt. Vernon

At Casey Junior High School, we have been able to integrate writing across the curriculum into an existing special program of study. Each year, the World Affairs Forum of Mt. Vernon selects one country to honor in a community-wide effort to promote international understanding and goodwill. For this special unit, the whole school spends approximately a month learning about a single country in depth — its geography, industries, history, literature, and other arts. Related extra-curricular events are scheduled throughout the fall. In the fall of 1985, India was chosen for celebration.

We were well prepared for integrating writing into all our subjects since five of us had attended the summer institutes at SIU-C. Ann Garrett, a language arts teacher, attended in 1984, and four of us attended the following summer: Barbara Wilson, social studies; Suzanne Ludwig, science; Madeline Meadows, language arts; and Cynthia Johnson, music and language arts. We adopted a real team approach to the project, collaborating at every stage, talking through all our plans, and even writing our proposal together as we sat grouped around a microcomputer or as we commuted to Carbondale for the Institute. Working closely with other teachers in the building has been good for all of us, since it causes us continually to reflect on the goals and methods of our programs. When science and math teachers start talking with social studies and English teachers, we all begin to realize how much we have in common, how united we are in having as our major goals the development of both the thinking and communicating abilities of our students.

Activities

During the first week of school, a group of 35 eighth graders traveled to Chicago to view the "Festival of India" exhibit, sponsored by the Smithsonian, at the Museum of Science and Industry. This exhibition featured contributions of ancient Indian crafts through the recreation of an Indian village with all its associated sights, smells, sounds, and activity. All students kept a detailed account of their experience, which included their observations of and interviews with the Indian craftworkers. Subsequently, these students individually shared their reports with students in classes having the same subject matter as the report —

math, science, art, home economics, shop, music, or social studies. Most of the students also wrote highly personal and reflective notes thanking the school board for the trip.

During the special unit, the reading and English teachers showed the film *Gandhi* to all their classes, an experience which had a tremendous emotional impact on the students. The students used a set of guidelines to compare the life of Gandhi with the lives of people in American history. They were also challenged to stretch their imaginations in some of their journal assignments. One assignment was to envision themselves in a certain caste in India and then to write about their day based on class discussions concerning food, jobs, housing, and clothing.

Math classes speculated in writing about a numerical system without zero and about calculating the area of a circle without pi — both concepts contributed by Indian scholars to mathematics.

Home economics students studied the fashions of India and spent an afternoon at the Mitchell Museum in Mt. Vernon viewing a fashion show of Indian saris. Afterward, they wrote their own commentary on Indian fashion styles and an explanation of the make-up and design of particular fabrics used in saris. Indian foods were studied with an emphasis on how curry is individually concocted by each cook from a combination of spices. Many students who had gone to Chicago included in their journals revealing and colorful descriptions of their reactions to the Indian foods they had tasted at the museum.

In music classes students wrote a short dramatic script set in India and then created a dance using *mudras* (hand gestures), body movements, steps and mime to illustrate their story. On another day, Indian dancers performed the Bharata Natyam, a classical Indian dance, for the whole school. Because students had been studying and writing about the concepts and symbols which form Indian dance, the students were a very appreciative audience, and they followed the performance with keen interest. After the dance recital, students wrote essays about the musical accompaniment, costumes, make-up, story-line, mudras, dance step and audience etiquette.

Science students studied the ecology of India after learning the meaning of such words as "natural heritage," "habitat," "ecosystem," "food chain," "food web," and "niche." Background information was gathered by answering questions such as "What landforms are in India and where are they located?" Each landform feature was described with respect to its value to native plants and animals. Common and endangered species of animals native to India were researched; the descriptions of these animals

included information concerning the habitat necessary to the animal's survival. As for plant science, areas of high yield were determined and cited for the following products: rice, corn, barley, wheat, fish, jute, silk, lac, coffee, and tea. As information about all these aspects of India's ecology was gathered, it was recorded on large student-made maps, so students came to appreciate the whole of the region.

Evaluation

In the social studies class, the study of India included pre- and post-tests of the students' knowledge to give the students themselves an appreciation for all they would learn throughout the school-wide program. The pre-test was disguised as an imaginative writing task:

CONGRATULATIONS!

You have just been assigned the job of making a movie about India. The credits will read:

_____ ..... Director

(Fill in your name.)

What will your setting be like? Describe it for your producers as completely as possible.

Will this be a drama or a documentary?

Describe the people you would ask central casting for:

What would they wear? eat? do for a living? What would they enjoy?

After the unit on India was completed and the students had taken part in the other India-related activities, the following assignment was given as a post-test:

FOR IMMEDIATE ACTION

First, the bad news: your first movie about India did not receive a nomination for an Oscar. In fact, it was not exactly a hit at the box office.

Now, for the good news: the backers at the studio have decided to give you a second chance to write, direct, and produce another, better movie about India. However, you must prepare a GOOD presentation to sell your idea to these backers.

Begin with the title and your name on the credit line and then describe the setting, characters and story of your film. Be as thorough as possible. Good luck this time!

In a debriefing session students compared their two assignments side-by-side. Most were amazed by the progress they had made.

We have made good progress toward integrating writing across the curriculum as a learning tool. The students have had the chance to express themselves about a foreign culture with creativity and with care for facts. Their purposes for writing have been diverse — speculative, reflective, interpretive, poetic. Their writing has reflected a variety of audiences — inside school and out, familiar and non-familiar, student and adult. We have learned together, drawing into our school members of Mr. Vernon's Indian community and SIU-C's Indian Student Association. We have seen evidence of the effectiveness of our efforts in the published and performed work of our students, and in the community response to the program. In our local newspaper, we have been happy to see letters to the editor and articles describing some facet of Indian life, written by either our students or members of the Mt. Vernon community. Though it is hard to believe, we have even heard several reports from students dinner table conversations, the subjects of which were writing.

Next year... Poland. We will keep working to integrate writing into all our subjects. Two of us are now running controlled experiments on classes of music students, with some students writing as well as learning in other ways about music, while the experimental group writes in various ways as part of their learning. Our pilot test results this spring have been inconclusive, but we are refining our plan and will try again in the fall to produce results which indicate what we know about writing across the curriculum: that it not only improves writing, but improves learning and retention.

Final Comments

These projects are testimony to what creative teachers can do to involve students in active, engaged learning, with writing thoroughly integrated into the study of important topics. The projects show how teachers can collaborate with administrators, parents, and community to bring student learning and writing out into the world beyond the school confines. Each project demonstrates an important principle, one which is basic to writing instruction: that writing is best approached in the context of real purposes and audiences. Learning to write is a natural part of the processes of learning, observing, recording, discussing, and publishing. Writing adhering to this principle makes sense to students because writing is not a separate, isolable skill, but a central part of learning and sharing one's learning.

The two projects described here are ambitious in design and execution. Writing across the curriculum projects needn't be so

elaborate. Small collaborative acts and simple, well-conceived assignments can also contribute to developing writing across the curriculum. Such efforts have a yeasty effect: when a few teachers begin using writing in creative, interesting ways, other teachers hear about it. Small projects can raise the currency of discussion of literacy and exemplify in useful ways how to make writing a part of learning.

The school climate is right for bringing about such changes in education. Summer programs are available at most universities around the state for practicing teachers who want to know more about how to integrate writing into the content areas. Grants are available from the Humanities Council and elsewhere for teachers who want to begin similar programs. It takes energy and creative thinking, but most of us entered teaching in the first place because we possessed these qualities. Everyone stands to benefit in the revitalization of learning which can take place by incorporating more writing into the curriculum. We would like the description of these projects to serve as inspiration to other teachers who would like to bring about similar changes in their own schools.

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Reaching Across the Curriculum with a Writing Center

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On a recent Wednesday morning, I gathered the records of student conferences in the writing center where I teach at the University of Wisconsin-Madison to see who was coming for

instruction. Here is what my quick survey revealed about the twelve students who had come for my help already that morning:

Student	Subject of the Conference
1. Sophomore, Occupational Therapy Major	Women's Studies Paper on Attitudes Toward Childbirth
2. Sophomore, Pre-Journalism Major	Introductory Sociology Paper on Kinship Networks and Her Family
3. Sophomore, BA	Essay Exams from a History Course
4. Ph.D., Meteorology	Doctoral Dissertation
5. Senior, Secondary Education Major	Political Science Paper on the Cult of the Presidency
6. Freshman, Pre-Business Major	Introductory Literature Paper on Hemingway and Owen
7. Freshman, BA	German Literature Paper and Introductory Philosophy Paper
8. Sophomore, BA	Psychology Lab Report
9. Freshman, BA	Philosophy Paper on Hume
10. Junior, BS	Introductory Literature Paper on Wordsworth
11. Freshman, BA	No Show (a fact of life in writing centers!)
12. MS, Pharmacy Major	Pharmacy Thesis

Not every Wednesday morning in our writing center is like this one, but what is most striking about this list is its variety — in the levels of the students coming for instruction and in the kinds of papers they were writing. Although some of this variety can be attributed to our writing center's being located on a large, diverse campus. I choose to interpret it more as a confirmation of what those who teach in writing centers firmly believe: that providing writers with an opportunity to talk about a paper while it is still in progress is not something of value only to a particular group of student-writers. Its appeal should cut across disciplines and levels of ability. In this paper I would like to suggest some ways a writing center, in either a high school or a college, can extend its reach across the curriculum, so that there is frequent and rewarding contact with faculty in various departments, and so that students think of the writing center as a place to discuss their writing from all courses, not just English. The match between writing across the curriculum and writing centers

is a natural one, in fact an inevitable one. Even if a school does not have a formal or established writing-across-the-curriculum program, a great deal of writing is being done in many courses, and it is appropriate for writing centers to be a part of it.

I

Unfortunately, writing centers are often limited in all sorts of ways. They frequently have been, and sometimes have allowed themselves to be, cast in very narrow roles. Many serve primarily or even exclusively particular groups of student-writers — often only those in writing courses and often only those students who are at the most basic level. Some serve only special subsets of these students — perhaps only those who are referred by instructors or only those who score below a certain level on a standardized test. Even if there are not such explicit limitations as these, there are often implicit ones, many of them having to do with the ways writing centers are perceived. Too many faculty and students simply do not know what happens in writing centers, or do not know the extent of their services. Writing center directors need to make sure that they do know, and they must subtly but firmly correct misconceptions, for it is in the definition and understanding of writing centers that limitations in perspective begin.[1]

There are, of course, almost as many different models for writing centers as there are writing centers. What distinguishes the best, however, is not how large they are, or whether their staff consists of peer tutors or professionals, but rather what their philosophy of writing instruction is and how well they convey it to faculty and students. Writing centers should not be viewed as safety nets for writing courses, or as fix-it shops, or as intensive care units where only maimed and diseased writing is treated, or worse yet, where only failed writers go. Good writing centers are not filled with students, injured in some way, dutifully completing workbook exercises which magically cure them of all writing ills, and the air in these centers is not thick with grammatical terms; but rather they are places for writers in all disciplines, regardless of their ability, to improve actual papers in progress.

This kind of instruction takes the form of a conversation, one designed to help a student discover ways to get started, to make the assignment her own, to develop her ideas, and to revise a draft to make it square with her intentions. A writing center provides the kind of patient and experienced reader that every writer needs and wants at some point, a reader who is sympathetic but tough.

When writing centers are able to overcome the actual and the perceived limitations imposed on them, they can become a far

more integral part of the curriculum. And more and more writing centers are doing exactly this.[3] The fact that they are breaking free from curricular boundaries is not accidental, nor is it solely a consequence of the shrewd political instincts of writing center directors. Instead, this growth stems from the fact that many of the principles underlying writing center instruction are the same as those promoted by composition theorists and researchers and by wac programs. A quick review of a few of the most basic principles of wac reveals the obvious connections.

First, there is understood to be a crucial link between writing, thinking, and learning. Thus, writing is no longer considered (and taught as) simply a skill, something that can be learned once and for all at some early level (just as thinking cannot be), and that never needs to be used in any way again except as a means to test knowledge. If writing is connected to thinking, it then becomes the domain of all teachers, not just those in English departments. Second, writing is understood to be developmental: as students grow and mature intellectually, they take on new and more challenging writing tasks. A corollary of this is that writers sometimes regress when they move to new levels or begin to write in new disciplines. Thus, writing instruction needs to be ongoing, and help with writing needs to be available outside composition courses. And a final point worth noting in this connection — writing is understood to be a process, something far more than simply a static product. Student-writers need to learn that writing is necessarily and profitably recursive, and they need to have opportunities to discuss their writing with an audience while it is still changeable.

Precisely because writing centers can be extremely flexible — able to help students whenever they are ready to learn, to tailor instruction to their individual needs, and to provide a convenient audience at any stage of the writing process — they are in an ideal position to complement course instruction across the curriculum. And because writing centers see so many different kinds of students and assignments, they can be an especially valuable resource to writing-across-the-curriculum programs, helping to discover and teach the generic principles which cut across disciplinary boundaries as well as the conventions of thought and form which characterize different disciplines.

II

If we agree that writing centers should be working with students writing papers of all sorts, how then can they prepare themselves to do this effectively? I would like to suggest a range of

approaches, some of which we have tried at Wisconsin, others which have worked at other schools and colleges. Above all, a writing center director needs to reach out to faculty in various disciplines, for insularity can be dangerous to a writing center's health. A director must meet with colleagues in other departments, must talk with them in detail about the ways students write in their courses, and must offer to go into their classrooms. Here are some ideas for getting started:

— First, survey the field. What kinds of writing are being done in your school? Who is assigning it? At what levels? Ask to see some sample assignments and some sample papers (be sure to explain to your colleagues that you are interested in learning from them, not in judging their assignments or responses to student papers). Ask teachers what they are looking for in students' writing and what they hope students will learn from writing. Ask what their students are doing well and how they could improve.

— Do some basic reading in a good wac textbook to discover more about the ways writing can be used to promote learning in subject areas and to develop an appreciation for the conventions of writing in different disciplines.

— Offer to make a joint presentation on writing in a colleague's class. We have had good success doing this with courses of many sorts, including geography, political science, and sociology, usually in connection with a particular paper assignment. But we insist upon certain ground rules, designed to ensure that the presentation is truly appropriate for the students and that we are supporting, not undermining, the principles of writing across the curriculum. Well before the class session, we meet with the course instructor to discuss how writing is being used in the course and the goals of the writing assignment, and we then plan the class jointly. As a result of these discussions, we are often asked to make suggestions for improving assignments or about alternative ways to use writing to promote learning in the course, and this collaboration often leads a faculty member to participate in a future writing-across-the-curriculum program. The writing center instructor and the course instructor then share responsibility for leading the actual class session, during which they discuss the writing assignment and provide students ample opportunity to talk about their writing and to raise questions. Students profit from hearing a discussion of writing between a course instructor and a writing specialist, who, in turn, learn a great deal from each other. We always close these sessions by explaining to students how best to use the writing center and encourage them to come in as they work on papers for this course.

The preceding suggestions are essentially external activities which help establish contact between the writing center and various departments. Activities *within* the writing center itself are equally important to ensure that the staff is prepared to help students with all sorts of papers. First of all, the director and the tutors need to believe that they can be helpful even if they have not taken the particular course in which a paper was assigned. This is in fact a tenet of writing center instruction. We do not promise to provide an expert in the subject matter of every course. Instead, what we offer is an intelligent, experienced, general reader who understands something about how writers write and what constitutes good writing, and who has both the confidence and the good sense to refer students back to course instructors when it is appropriate.

Some other ideas for preparing a center staff:

— The staff itself should be chosen to represent a variety of academic interests. Consult with faculty in various departments for suggestions for new staff. Effective tutors are more than good writers themselves; they need to have broad interests, to be naturally curious about different subjects.

— Staff members need to be exposed to all sorts of writing assignments, especially those which are most alien to their own academic experiences. Faculty members are usually glad to share some of their assignments and successful papers for the writing center to use in training.

— Writing center handouts should include examples from across the disciplines, and they should cover the forms of writing used in various departments.

— Faculty from other disciplines often make excellent guest speakers at staff meetings. Within the last year, for example, we have had faculty from engineering, law, psychology, sociology, women's studies, and biology speak to our staff about the kinds of writing done in their fields.

III

In many ways, the preparation for reaching across the curriculum I have been describing helps persuade students and faculty from courses other than English to take advantage of the writing center. Every effort the writing center makes to reach out to faculty and to take their teaching of writing seriously helps lead to increased use of the writing center by students from their courses. But the most important promotion of all is good teaching — students listen to what their friends tell them about writing center instruction; if the word is good, students come. In most

writing centers, though, it is still necessary to do some special things to attract students writing papers in a wide range of courses. Here are a few suggestions for doing that, the first few aimed at students:

— Have a cross-disciplinary approach in publicity materials.

— To use a marketing term (yes, there is marketing involved in writing center instruction!), segment the market: put posters up in certain parts of the school (by the chemistry or history classrooms, for example); design some flyers specifically addressed to the needs of particular groups of writers.

— Have tutors talk with students who come in for composition papers about other kinds of writing they are doing, and specifically urge them to use the writing center for all kinds of papers. Despite a center's best efforts at publicizing the breadth of its program, some students are still surprised when they are told that the writing center offers help with all kinds of writing.

— Design some programs specifically for advanced students: hold a special session on writing an honors paper or create special peer review groups for an honors class. Associating the writing center with the best students and the most challenging classes almost inevitably attracts students writing in all sorts of disciplines.

— Offer some special sessions on non-academic writing, such as writing job letters and resumes or college applications; for graduating seniors, offer a short program on writing in the workplace.

Other ideas for broadening the use of a writing center involve faculty:

— Ask faculty to mention the writing center on their syllabi or assignment sheets; help them by sending out reminders at appropriate times.

— Ask faculty to talk about the writing center in their classes (or to invite the director to do so). Urge them to describe instruction in the writing center not as something punitive or remedial but instead as a wonderful opportunity.

— Try to bring faculty themselves into the writing center by having a presentation on science or history writing, or by scheduling a meeting there; hold a public tutorial; have a panel of tutors discuss their experiences in the writing center; arrange a faculty panel for students to interview about their writing and about writing in their disciplines; if the center has computers, hold a special session about ways computers can help faculty writers.

— Ask some faculty members from outside the English Department to volunteer some time to tutor (be sure to have them participate in the center's training program).

— And, finally, do not be shy about sharing some success stories with faculty in other disciplines.

IV

It is important to ask, since time and money are always scarce, whether the advice offered here is worth the effort. Obviously, I think the answer is yes. First of all, it is exciting and rewarding as a teacher to be doing new things; it keeps us vital. In addition, we should accept the reality that it is politically wise for writing centers to broaden the base of their support. Writing centers often find that many of their strongest supporters come from outside the English department, from faculty who see the center as providing essential instruction for their students.

But reaching across the curriculum does more than ensure our survival; it has genuine educational benefits. Students writing in all sorts of courses need what we can offer. In fact, and this may seem surprising, students writing papers for English courses should need us the least. Or, put a different way, in non-composition courses, when writing itself is not the subject matter of the class, students need the kind of instruction offered by writing centers the most. We all agree that writing should be part of these courses as an aid to learning that discipline and as a way to ensure that writing is practiced frequently, but we must recognize that there will never be as much time in them to discuss writing as there is in a composition course.

Ultimately, writing centers should, like the concepts of writing across the curriculum itself, touch every department, at every level in our schools, for, in both theory and practice, they are resources for the entire curriculum. By breaking free from narrow, prescriptive roles, writing centers benefit everyone in a school or college — students and faculty in all disciplines — and, what is often overlooked, they reinvigorate themselves. Writing centers ought to be, then, as their name suggests, not on the periphery but at the center of a lively, exciting, and fresh dialogue that is writing across the curriculum.

Notes

[1] For a very persuasive statement of what writing centers are and how they suffer from being misperceived, see Stephen North, "The Idea of a Writing Center," *College English*, 46 (1984), 433-446.

[2] Connecting writing centers with writing across the curriculum is one of the hottest topics in publications about writing centers, as the list of recent articles in this collection's "Selective Bibliography" suggests.

The Creative Process in Literature: A Basis for Connecting Writing and Literary Studies

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Normal

Much of the work in composition studies in the last several years has focused on connecting writing to other aspects of the curriculum. Writing-across-the-curriculum programs, for example, have promoted the role of writing as a learning tool in all courses. One aspect of the curriculum whose connections to writing demand much more consideration than they have been given is the study of literature. Certainly, literature has been one type of course included in writing-across-the-curriculum programs. Teachers have learned to use writing as a learning tool in literature courses as well as chemistry, history, and political science courses. But writing has a more special relationship to literature than it has to these other subjects, and it is this special relationship that English teachers at all grade levels should recognize and take advantage of in the courses they teach.

It is somewhat ironic that, despite the natural affinity between composition and literature, researchers and teachers often have treated the two as if they were diametrically opposed to one another. This approach is not only mistaken but is also counterproductive both for developing students' writing abilities and for improving their capacity to respond to a literary work. In an introductory essay to a book concerned with the gap between composition and literature, Winifred Horner stresses this point:

> This book comes out of a deep concern about the widening gulf between research and teaching in literature and research and teaching in composition. Such a separation represents a fracturing of the discipline that is detrimental to work in both areas, as unproductive as it is unwarranted. (1)

One obvious but central connection between composition and literary study is their shared concern with the nature of a text — what it is and how it came to be. Although composition focuses on student texts and literary study on noted literary texts, the processes underlying the creation of both have enough in common for students to benefit in their ability to write and in their ability to read literature from a course that uses each to enlighten the other.

Creating such a course demands, as a first step, that the study of literature draw from recent approaches to the teaching of writing. That is, teachers cannot concentrate exclusively on the final form a literary text takes and ignore the creative process through which the text achieves this final form. They should use a writer's letters, manuscript drafts, journals, notebooks, and other materials that embody his or her prewriting, drafting, and rewriting processes. Such an approach connects the study of literature to composition by viewing both in terms of the sub-processes essential to the writing of a text.

Approaching both writing and literature from the perspective of the creative process can strengthen the students' ability to read literature as well as their ability to write, because their weaknesses in both often extend from their taking a text, whether it is someone else's or their own, for granted. They fail to read literature well partly because they do not see the thematic function underlying the details of the texts they read; for them, one detail is no more or less significant than another (Hunt 348-349). However, by studying the invention, drafting, and revision operations underlying the texts they study, they can see the careful decision-making processes that led to the details constituting these texts, which, in turn, enables them to see the thematic purpose of the texts' particulars.

At the same time, approaching literature in this way will combat the students' tendency to take their own texts for granted by instilling in them an understanding of the roles of prewriting, writing, and rewriting in the production of an essay. More than one study has argued that students do not write well largely because they lack a sense of the complex set of activities necessary to the composition of a text. They are too easily satisfied with sitting down, drafting a text, and considering the job finished. But if they can see the care with which the authors of great literary texts prepare for, work, and rework their manuscripts to ensure that their intentions are realized and that their writing is accessible to others, students become aware of the need to prepare for, work, and rework their own texts. Moreover, studying the materials that precede and attend the evolution of a literary text can give students concrete models of the kinds of activities they should be undertaking in creating the essays they write.

Integrating composition and literary studies by looking at the activities inherent in the creative process obviously means that the materials illustrating the composing processes of writers must be available. And, in fact, because biographical and textual criticism are established branches of literary criticism, teachers should

have little difficulty locating these materials. The main task faced by teachers using this approach is determining how to adapt the materials available to them to exemplify the various sub-processes of writing — prewriting, drafting, and rewriting.

Most great literary artists have left extensive records of their prewriting processes in their letters, memoirs, notebooks, and other writings. In these records, they often discuss where their ideas come from and how they find the literary vehicles through which to express their views. Using these materials should not mean that teachers and their students become preoccupied with source finding; rather, it should mean that they try to discover in the materials a writer's characteristic thinking processes and ways of viewing the world, for in these processes and viewpoints can be found the seeds of his or her art.

Eudora Welty's recently published *One Writer's Beginnings* suggests one way in which a writer's life and experiences provide the creative imagination with its raw materials:

> ... the outside world is the vital component of my inner life. My work, in terms in which I see it, is as dearly matched to the world as its secret sharer. My imagination takes its strength and guides its direction from what I see and hear and learn and feel and remember of my living world. (76)

This passage, and indeed the entire book, show how, for some writers, art bears a subtle relationship to experience, a relationship in which the images, scenes, and situations accumulated in the writers' lives provide an intellectual and imaginative milieu from which they draw consciously and unconsciously in creating their art. Studying the invention processes of these writers requires becoming familiar with that milieu through the self-revelatory studies they offer.

Sometimes writers use essays, speeches, notebooks, and letters as prewriting materials in which they rehearse ideas and techniques that later inform their art. Charles Dickens exemplifies this approach to prewriting especially well. For many of his novels, teachers and students can see in his essays, from *Household Words* and *All the Year Around*, as well as in his many speeches his working over ideas that were later transformed into the themes of his fiction. In 1859, for example, Dickens initiated a series of essays in *All the Year Around* called "The Uncommercial Traveler." Many of the essays in the series took him back to the scenes of his childhood so that, when he began *Great Expectations* in December 1860, the novel became an extension of the feelings and scenes covered in the essays. Examining the essays in conjunction with the creative work, then, affords students the unique

opportunity to witness the transforming power of the creative imagination, which generally can underscore their own need to work out ideas in the form of prewriting before transforming them into finished essays.

A variation on the form of prewriting exemplified in Dickens involves a writer borrowing from previously completed stories or poems in composing a new work. With such a composing style, a writer's work involves an ongoing refinement of past themes and techniques and a merging of old with new materials. In creating *The Bear* (as it appears in *Go Down Moses*), for example, William Faulkner worked concepts, sentences, and paragraphs from three earlier stories ["Lion" (1935), "The Old People" (1939), and "The Bear" (1942)] into the novella's first three sections. Faulkner added to and changed the materials from the earlier stories to accentuate the mythological and religious dimensions of the actions being described, but the core of these sections is based on his earlier work. In a sense, for writers who compose in this way, each work is a preface to later works, and understanding their prewriting processes necessarily includes, at least on the teachers' part, a familiarity with their entire canons.

The availability of the various drafts through which writers worked in creating many great works of literature makes it relatively easy to view, at least from a distance, writers in the act of drafting as well as prewriting. Samples of drafting materials can enhance the development of students' writing abilities because they dramatically illustrate a lesson that writing teachers stress again and again: that the act of writing itself helps writers to extend their insights into the themes they address. In literature, studying drafts promotes the development of students' abilities to respond to a literary text by enabling them to see more readily than they generally do the craft and art invested in a text's creation. An appreciation of this craft and art, in turn, makes possible their comprehension of a text's themes.

Often, the notebooks or memoirs of an author contain at least sections of manuscript drafts that are sufficient for students to see the kinds of decisions an author makes in fashioning a text. The notebooks for Dostoevsky's five major novels depict the kinds of benefits that accrue from studying the drafts of a text in conjunction with the text itself. In his introduction to *The Notebooks for Crime and Punishment*, Edward Wasiolek identifies these benefits:

> What do the wrong turns, mistakes, blind alleys, and unmined possibilities tell us? How do we go from possibilities to the fact itself? They remind us, first of all, that the marvelous

> coherence of *Crime and Punishment*, the creative logic that takes us with what seems to be inevitable movement from beginning to end, was once uncertain, halting, and far from clear. They tell us something about the way Dostoevsky's creative imagination works. . . . (6)

As Wasiolek observes, Dostoevsky's experimentation with point of view in *Crime and Punishment* reveals how he used the process of drafting to discover his themes and the techniques through which those themes could best be articulated. In his early drafts, Dostoevsky relied on a first-person-as-diary viewpoint and, later, on a first-person-as-memory viewpoint, but he realized as he worked that using these viewpoints undermined his narrative credibility and severely limited his ability to use his secondary characters to illuminate his themes. By switching to a limited omniscient viewpoint, Dostoevsky was able to include scenes and events that otherwise would have seemed unreasonable, and he made it easier to use Sonia, for example, as a thematic counterpoint to Raskolnikov.

A drawback to studying the drafting process connected with the creation of a novel is that the drafting materials can be as extensive as the novel itself, which means that examining these materials and reading the novel can be very time consuming. For this reason, it is sometimes best to select drafting materials associated with a short story or a short poem. The same lessons can be stressed, and because they proceed from the relatively circumscribed process of drafting a short story or a short poem, these lessons may be more immediately apparent to students than they would be if based on the drafting of long texts. A teacher might select, for example, the drafts William Blake produced as he worked on "The Tyger" (the changes he made as he moved from draft to draft are recorded in David Erdman's edition of *The Poetry and Prose of William Blake*, 717). The first draft of the poem was substantially revised as Blake did not even have his title until the second draft, and all of stanza five was added after the first draft. Critical changes in phrasing also were implemented with the second draft as Blake decided that he needed to counterbalance the impression of evil that dominates the first draft by asserting the positive aspects of the force the poem describes. Again, all of this illustrates Blake's growing understanding of his themes through the act of writing, and his experience with "The Tyger" may be the most impressive way a teacher can communicate to students the value of drafting as a means of extending their understanding of the issues about which they write.

The separation of writing activities into prewriting, drafting, and rewriting is somewhat artificial and only suggests in very

broad terms the kinds of activities in which writers engage. Certainly, students can learn a great deal about rewriting from studying writers' drafting processes. They can also learn a great deal about rewriting by studying the polishing processes involved in bringing a more or less finished manuscript to final form. The advantages of studying these activities are the same as the advantages that derive from studying writers' drafting processes. Students' understanding of the writing process is increased because they can see how writers reworked details at the last minute to ensure the effectiveness of their texts. Their appreciation for the literary art and themes of the texts grows because they can observe how carefully a text's particulars are worried over and how these details collectively reflect an underlying artistic design.

When writers bring out a text in different editions or when they publish periodical versions of stories that later appear in collections, they offer students an opportunity to observe how they "resee" their work over time. Often, the changes authors make are minor, but just as often these changes are substantial and have a significant impact on a text's meaning. The publication history of Thomas Hardy's *Tess of the D'Urbervilles* illustrates this process very well. Originally published in a serial version appearing in the *Graphic* between 4 July and 26 December 1891, *Tess* came out in three more editions (the so-called "Fifth Edition" in 1892, the 1895 edition, and the definitive Wessex edition of 1912). Hardy toned down the serial version of the novel because of the difficulties he experienced in finding a publisher; in subsequent editions, however, he restored items deleted from the serial version and introduced new items he thought appropriate as he revised the text. One effect of the changes he made was to soften Tess's character and make her more explicitly a victim of external social and natural forces. The changes illustrate both how audience awareness can influence the character of a text and how interconnected the details of a text are as a single adjustment in a text often necessitates a sequence of other adjustments.

Writing teachers have become increasingly convinced in the last several years of the value of peer editing as a means of improving students' abilities to revise texts, their own as well as someone else's. However, they often overlook the many examples from literature that demonstrate the methods and value of peer editing. One of the best examples from modern literature of a writer-editor relationship and of an editor's effect on a text is the role that Maxwell Perkins played in the composition of *The Great Gatsby*. Perkins was especially helpful in suggesting where Fitzgerald failed to give his readers everything they needed to see the

characters and events in the novel as Fitzgerald wanted them to. It was Perkins, for example, who suggested that the novel needed to bring out more explicitly the dark side of Gatsby's background. In response to this suggestion, Fitzgerald added the episode in which Gatsby receives the telephone call from Slagle and the scene in which Tom Buchanan accuses Gatsby of illegal bond sales. As this example illustrates, peer editing in literature can communicate dramatically the salient effect that a collaborative "re-seeing" can have on a text's final form.

Most of this discussion has focused on using background materials to demonstrate different processes in the creation of various literary texts. An alternative way to examine the creative process in order to teach both writing and literature is to study all aspects of the creative process with regard to a single text. Thus, if all of the materials are available, a teacher would cover the prewriting, drafting, and rewriting processes invested in the creation of a particular text. Whatever route is followed, however, teachers should realize that the many documents reflecting the creative processes behind great literary texts provide invaluable but generally untapped resources for teaching writing, for teaching literature, and for teaching the two together. Finally, critical to learning in all English classes, whether they focus on composition, on literature, or on both, is an understanding of the text as a dynamic not a static entity, and this is what the kinds of documents discussed here can convey with dramatic clarity.

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Using Writing to Develop Metacognitive Skills

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One common goal of educational curricula is to have students show evidence of their learning both across the curriculum and outside the school setting. If what is learned in school cannot be generalized and applied, or "transferred," to new situations, of what value is it? Early views of transfer of learning focused on the similarities between learning tasks as the key determiners of positive transfer. These early studies told teachers to point out the similarities of substance, procedure and principle in different tasks so that transfer could occur. Contemporary views of transfer accept these earlier findings but have a different, broader focus for research. Today's cognitive psychologists are intent on investigating the thought processes of people who demonstrate the ability to transfer learning.

The term "metacognition" has been applied to these unique thought processes, to thinking about thinking. Metacognitive thoughts during learning and transfer are of two kinds: thoughts about what one knows, and thoughts about regulating how one goes about learning. Metacognitive skills are thus self-monitoring skills that need to be activated during instruction. If such skills are not developed, students face each learning task as if it were their first. If learning is to become easier as they learn more, and if their learning is to be useful in a broader context, teachers must develop in students a set of metacognitive skills.

Writing offers an easy, viable way to discover and develop these metacognitive skills. The writing advocated here is not the writing typical of the theme or essay, but a personal, expressive writing not necessarily intended for publication. The problem for teachers is linking these two elements, writing and metacognition, into a learning strategy that promotes transfer. This article will offer such a linking, first by establishing the importance of transfer, then by showing how the development of metacognitive skills improves transfer, and finally by exploring the use of writing to discover and develop students' metacognitive skills.

Transfer of learning means simply that experience of performance on one task influences performance on some subsequent task. Educational training programs are based upon the assumption

that transfer occurs. It is assumed that elementary study of basic computational skills will be useful in a variety of daily activities, such as making change and balancing the checkbook. Pilots receive extensive training in simulated cockpits because it is assumed that such training will carry over to the actual flying task. Since educational and training programs are designed to teach for transfer, it is important to discover the conditions that govern the transfer of learning.

In the 19th century study of transfer, the idea of "formal disciplines" reigned over the academic curriculum. Proponents of this theory maintained that the mind could be trained and made more disciplined by studying a classical curriculum concerned mainly with the memorization of Greek and Latin authors, insisting that it exercised the mind, thereby developing memory, judgment and many other valuable faculties. However, through the early experiments of Thorndike, this very general theory of transfer was disproved. In its place Thorndike proposed a specific, limited theory of transfer in which "a change in one function alters any other only in so far as the two functions have as factors identical elements" (Thorndike 358).

His theory of "identical elements" contended that learning in one kind of activity would transfer to another only when certain features such as substance, procedure or principle were *identical* in the two tasks. Transfer following the Thorndikian restriction of identical elements explained only learning in which learning tasks were quite similar. Thus it accounted for only small amounts of the transfer that educators knew was occurring.

For another branch of researchers, contemporaries of Thorndike, this limited view of transfer was not adequate. They sought a theory of transfer that could explain and facilitate the application of learning from one discipline to another where the tasks were quite dissimilar. In particular, the identical elements theory came under attack as a result of studies by Judd and his colleagues. In reaction to Thorndike, Judd stated, "The nature of transfer is such that no simple formula like that of the presence of identical elements is remotely adequate." Transfer, he said, "is a type of organized mental reaction; it depends on creative synthesis" (Judd 57).

Judd argued that the important condition for transfer was the student's ability to abstract, in a sense create, general rules or principles for himself. He called this a "theory of generalization" in that he saw the student as able to generalize experiences from one situation and apply them to another.

Judd's experiments and ideas are especially pertinent because he saw language as all important to the transfer of learning. "The human power of generalization is so intimately related to the evolution of language that the two cannot be thought of as existing separately. Words are records of generalization, and their use implies the power to apply to new experiences the established classifications expressed in language" (Grose 21). Language was seen as the medium through which knowledge could be transferred from one situation to another.

Bruner, in his theory of cognitive growth, concurred with Judd. He also saw language as the key to learning and transfer. "It is through language that others communicate with us, teaching us their conceptions of the world; it is also through language that we communicate our conceptions of the world to others, and it is how we can question the way the world functions. Most important is the fact that as we grow older we learn to use language to mediate events in our world. This ability to provide 'linguistic mediation' ties one event together with another in a causal way, links the new to the familiar and allows us to code events so that we can deal with these internal representations" (107).

This mediating function of language in learning is explored through a contemporary branch of transfer study, metacognition — knowledge about one's own cognitive system (Gage and Berliner 358). To understand the role of language in this conception of learning and transfer it is necessary to distinguish between cognition and metacognition. Cognition implies using knowledge; metacognition is the awareness of and conscious control over the use of this knowledge. Verbalizing one's own thought processes, even internally, has the power to bring cognitions to conscious awareness. In other words, through language, cognitions become metacognitions that can be generalized and applied to a variety of situations. Metacognitive knowledge, that is, the ability to verbalize cognitive processes seems to develop slowly, and for some learners, it is never well established (Gage and Berliner 358). The discovery and use of metacognitive skills, however, is the difference between the expert and the novice in problem-solving situations. The experts can organize their previously acquired knowledge in such a way that they can apply it to seemingly new situations in order to solve new problems. This application to the new, of course, is transfer (Gage and Berliner 361).

Judd's "creative synthesis," Bruner's "linguistic mediation," and, finally, contemporary studies of metacognition all see language as central to learning. They propose that learning and trans-

fer are enhanced by the processing of information through an internal language. If teachers can gain access to this internal language, to the metacognitions of learning, and thereby "see" how students are processing information, they can guide and pace lessons more effectively for more efficient learning. This inner speech, however, is accessible to teachers only through students' talk or through their writing. Although much can be learned through discussion, writing possesses unique characteristics that are especially powerful for the discovery and development of metacognitive skills.

Emig insists that "writing represents a unique mode of learning — not merely valuable, not merely special, but unique. Writing serves learning uniquely because writing as process and product possess a cluster of attributes that correspond uniquely to certain powerful learning strategies" (34). Emig relates writing to the learning strategies of Bruner by showing how writing to learn is enactive, iconic and symbolic all at the same time. "The symbolic transformation of experience through the specific symbol system of verbal language is shaped into an icon (the graphic product) by the enactive hand. Writing through its inherent, re-inforcing cycle involving hand, eye, and brain, marks a uniquely powerful multi-representational mode for learning" (Emig 36).

Britton suggests that when we commit ourselves to paper the process of shaping experience is likely to be more focused than it is in talk. "The gap between transmission and reception of written language allows a writer, if he needs to, to wrestle with this thought, to work and re-work his formulation, or projection, or transformation of experience" (248). Vygotsky sees this translation from inner speech to written speech as requiring a "deliberate structuring of the web of meaning" (100).

If one looks at this "inner speech" as the metacognitions of learning, one begins to understand the power writing has to help discover them, and, once discovered, to develop them into powerful transfer tools for learning across the curriculum and in problem solving situations. Moffett describes writing to learn as "writing down inner speech, transcribing thoughts, self-dictation." But even in transcribing inner speech the writer/learner "does not write down everything and any old thing that pops into his head. Indeed, by setting some subject before himself at the onset, a writer directs his inner speech toward greater selectivity and then proceeds to develop the subject along some sort of progression that provides continuity" (Jenson 62).

How can this selectivity, this constructing of continuity, lead the writer/learner to alternate solutions for new problems, to

transfer? This is where the discovery aspect of writing comes into the picture. Moffett tells us that what is new in composing are connections. "The deliberate selecting of images and ideas and of words themselves not only breaks up routine and random inner streaming but *sustains the development of a subject beyond what we have thought or imagined about it before.* This is discovery. The composing process requires exactly the rearrangement of experience that jogs loose unused material and connects the heretofore unconnected" (Jenson 62). In looking at writing to learn as Moffett does, one sees its unique characteristics for stimulating metacognitive questioning of past experiences, and for enabling the learner to connect and apply past experience to new learning situations in effective and creative ways.

It must be emphasized that writing to learn is different from writing to inform or writing to be evaluated, which are typical of most school writing. Writing to learn is expressive, reflexive writing that occurs when one's mind *is engaged in choosing* words to express meaning. Writing to learn is learning to think on paper.

Although all students are capable of thinking, many do not recognize or cannot use metacognitive skills. By using writing to learn strategies students are forced to think, and can eventually learn to record, organize, and make use of the wealth of information they are accumulating. This expressive writing assumes that new ideas and facts will almost always evoke in students' minds at least a dim response, a vague perception or a visual image. The teacher must then provide situations that allow students to choose words and compose sentences that make that response, perception, or image more explicit. Student writing of this type often begins with what is known, moves through questions and ends with the student's own perception of what is yet unknown. The following expressive writing from a chemistry student named Tim illustrates this thinking on paper.

January 22 entry

> We learned about the mass spectrograph. Goldstien devised this apparatus to measure the mass of protons. A current of protons is sent into a chamber with a negatively charged plate. The plate has a hole in the middle, so the protons will speed forth in a straight line. Then neon atoms then bump off the electron — from a proton? I'm totally confused. I don't know what is sent into the apparatus to start — electrons, atoms? (Wotring and Tierney 29)

Another student writes his way through a lesson on bionics.

> The study of bionics is now somewhat clearer to me. I understand that men, biologists and engineers, are working together to understand the *plan* of living beings in order to dupli-

> cate that plan mechanically. Enough success has been met to encourage these men to pursue more difficult tasks, such as reproducing men in a predetermined way. They now understand the plan of the DNA molecule, which is a kind of blueprint, as I understand it, of living beings. If scientists reproduce DNA molecules the way they want, they can determine the course of evolution, and that is an awesome power many people do not want to see them have. I wonder what the legalities of some of these endeavors are. I also wonder if this is the process scientists talk about and use in the process of cloning. I do not understand *how* the DNA molecule is made from the plan. How is it engineered? When they reproduce the molecule, what is their approach — scientific experimentation until they get it right? (Wotring and Tierney 30)

These examples are from student thinkbooks or learning logs. Such content journals have proven to be effective writing-to-learn tools. They provide the place for students to think on paper, to explore their knowledge and bring it to verbal consciousness, to the metacognitive level. To prompt this kind of thinking students might be directed to:

1. compose useful, practical definitions of terms stated in a language and style that is entirely their own;
2. demonstrate their understanding of abstract concepts using concrete analogies;
3. evaluate the usefulness of material presented in class in terms of their own understanding or experience; and
4. devise strategies or questions that would facilitate their own learning (Young and Fulwiler 198).

The common element of each of these suggestions is that they demand the active, personal involvement of each learner-writer in the processes and content of the course.

Writing to learn depends upon this active rather than passive approach to learning. It requires that educators conceive of both learning and writing as meaning-making processes that involve the learner in actively building connections between what is being learned and what is already known. Writing to learn, to discover connections, to describe processes, to express emerging understanding, to raise questions, and to find answers provides the teacher with the single best means for helping students to discover and develop their own cognitive processes. Yet writing to learn seldom occurs in traditional classrooms.

A study conducted by James Britton, working with a sample of two thousand student papers from four grade levels, found expressive writing to learn in *only six percent* of the sample. Indeed, he found that the farther along children go in schools the less ex-

pressive writing they are asked to perform. Britton saw serious implications in these figures: "The small amount of speculative writing [writing to learn] certainly suggests that, for whatever reason, curricular aims do not include the fostering of writing that reflects independent thinking" (197). Students are performing informative writing tasks and being evaluated based on their writing says Britton, "without engaging in writing that promotes the thinking processes required to give full meaning to what is learned" (198).

From Judd's early theories of transfer, through Bruner's cognitive growth theory and finally in contemporary views of metacognition, language is seen as central to learning. Current composition theorists, such as Moffett, Britton and Emig have established that this language of learning is best exposed and developed through writing. Fulwiler has demonstrated in real classrooms with real students how writing can be used to facilitate learning in any content area. Yet writing to learn has not become an intregal part of most classrooms. Educators cannot continue to give lip-service to transfer of learning as an ultimate goal while denying students the opportunity to discover and develop metacognitive skills through writing to learn. The research implores educators to include expressive writing in all content areas so that students can learn to structure personal connections between new learning and old and discover applications for school learning across the curriculum and beyond the classroom.

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A Selective Bibliography of Writing Across the Curriculum

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Rarely do teachers feel that we have enough time or energy to explore what is new and innovative in our fields. We feel the pressure of finding time to keep current, time to discover what is worth reading as well as time to read it. This bibliography was prepared with that time factor in mind, incorporating only the salient resources for teachers who want to become more familiar with writing across the curriculum.

Though extensive writing-across-the-curriculum bibliographies are becoming available, the resources presented here have proved helpful to many teachers and are referred to frequently in the professional publications. The process of selection requires the omission of many valuable resources, but those teachers who do have the time and enthusiasm for further exploration will find additional bibliographies within the sources listed below. Included here are the most significant writers in the field, the theory in its most readable forms, and the most practical applications. This bibliographic guide offers an overview of what the well-read teacher should be familiar with in this evolving theory of education.

Writing across the curriculum is based on the theory of writing as process. Anyone wishing to understand and undertake writing-across-the-curriculum programs must be well-versed in this approach to teaching writing. Therefore, the first category of the bibliography lists the most important and influential works in this field. Writing as process focuses the teacher's time and attention on the ways to achieve a final product, rather than on just the grading of that final product. Thus, the articles included introduce the teacher to the theory and practice of prewriting, writing, and rewriting, audience awareness, collaborative learning, design of assignments that require multiple drafts, and evaluation.

Teaching writing as a means of learning and as an aid to improving thinking skills is the basis for writing across the curriculum. The articles and books in the second section of the bibliography, General Theory, explore how writing promotes learning, how students use language, and how the teacher can assist the process in the classroom. In general, these sources provide the historical and philosophic background of writing across the curriculum. The theory presented in these articles is integral to the understanding and implementation of writing across the curriculum. Major scholars who have pioneered the use of writing as a learning tool in all subject areas are included.

Two considerations in the establishment of a writing-across-the-curriculum program are the attitudes and skills of faculty members. Too often the teaching of writing is deemed to be the jurisdiction of the English teacher. Frequently teachers of other subject areas are hesitant to incorporate writing in their classrooms because they feel uncertain and negative about their own writing skills. Many also perceive writing as adding an avalanche of paperwork to their already overloaded schedules. Carefully constructed faculty workshops which introduce writing as process and allow teachers to begin to deal with their anxieties about writing and teaching writing are a key to any successful implementation of a writing-across-the-curriculum program. Articles discussing faculty workshops are listed in the third section of this bibliography. A variety of plans are included; all are practical and potentially beneficial in gaining faculty support for writing across the curriculum. Since an integral part of most faculty workshops is a survey assessing teachers' attitudes toward writing and its place in the classroom, articles discussing such surveys are included in this section.

The writing lab can be a valuable aid in the implementation of a writing-across-the-curriculum program. Since students bring in writing projects from all disciplines, writing labs are, potentially, writing-across-the-curriculum labs. The Writing Labs section of this bibliography is provided by Bradley Hughes, whose essay appears in this issue. Hughes' list consists of several recent articles intended to help directors of labs to reconceive their function and mission.

An extensive Practical Applications section provides a variety of actual classroom activities and assignments. This list includes selections dealing with all levels of instruction, from elementary to college. Also included in this section are articles which deal with a variety of content areas, including math, social studies, and science. The General Theory section should also be consulted for

examples of practical applications of writing to learn. In the field of writing across the curriculum, theory and practice are seldom separated.

In making these selections, the chief objective has been to provide a concise and practical selection of important readings for teachers with limited time. Using this bibliography will allow teachers to spend that limited time exploring these sources and incorporating them into their teaching, rather than spend that time searching.

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Call for Manuscripts

Student Reading **Deadline: November 15, 1986**

Student success in English is often closely linked to a strong background of independent reading and yet many programs are so densely scheduled with "required" units that comparatively little time is spent motivating reading on an individualized basis. Manuscripts are needed to answer such questions as: What books are today's students reading on their own? What books should teachers be recommending? Which recent authors are most worthy of attention? What are the *best* books — in teams of human values? literary merit? student appeal? Is there a core of books which best prepares students for college? Have reading interests changed? How can teachers motivate marginal students to develop a love of books? How can independent individualized reading be worked into the program?

The English Teacher's Own Writing **Deadline: December 30, 1986**

There have been many requests that an issue of *IEB* be devoted to the creative efforts of English teachers themselves. Many of you have enjoyed sharing your original poems and short prose pieces at conference sessions. Here is your chance to see how your work looks in print! Manuscripts should be typed double spaced and submitted in duplicate to Fred Preston, English Department, Eastern Illinois University, Charleston, IL 61920.

English Teaching in Small Schools **Deadline: January 31, 1987**

Teachers who have taught in both large and small schools point out the great contrast in working conditions. What "plays in Peoria" may not necessarily go in downstate Illinois. Undoubtedly the size and location of a school's community can affect attitudes, methods, and even subject matter. Since small schools receive comparatively little attention in professional books and journals, this issue will address their special problems and unique opportunities.

Manuscript Guidelines

Manuscripts should be from five to ten pages in length, typed double spaced, and submitted in duplicate. Please follow the new MLA style, including documentation within the text rather than through footnotes. Provide full identification of school affiliation and note if manuscript has been submitted elsewhere. For full consideration, manuscripts should meet the issue deadline and be on-topic.

Since each issue of the *Bulletin* focuses on a specific subject, writers are asked to consult the Call for Manuscripts included in each issue. Submissions should explore some aspect of the featured topic and should be written with an audience of English teachers (elementary through college level) in mind. Articles that provide practical information, pedagogical application of theory, or solutions to problems faced by English teachers are the most welcome.

The editor will acknowledge the receipt of all manuscripts and will notify the contributor of its acceptance or rejection. Please include with the manuscript a stamped, self-addressed envelope. The editor reserves the right to make minor revisions in the manuscript without consulting the writer and may return a submission with requests for more extensive revision before acceptance for publication.

Send manuscripts to Dorothy Matthews, Department of English, 608 South Wright Street, Urbana, IL 61801. Addresses for creative writing entries are listed elsewhere in this issue.

CALL FOR STUDENT WRITING FROM ALL LEVELS FOR IATE'S BEST ILLINOIS POETRY AND PROSE CONTEST

DEADLINE: January 31, 1987.

FORMAT: Typed copy is preferred.
8½ x 11 paper is mandatory (one side only)
Copy must be clear, legible, and carefully proofread.

LABELLING: Each entry must be accompanied by its own cover sheet, stapled to the entry, which states:

Full name of student
Student's grade at time piece was composed
Full name of school
School's complete mailing address
Full name of teacher (indicate if IATE member)

IMPORTANT: The student's name, the school's name, and the teacher's name must not appear anywhere else.

MAXIMUM NUMBER OF ENTRIES: Each teacher is limited to no more than:
Five (5) pieces of prose
Ten (10) poems

LENGTH: Prose entries (both expository essays and short stories) should be no more than 1,000 words.

MAILING:

Send prose to:
Samuel J. Rogal
Chair, Division of Humanities and Fine Arts
Illinois Valley Community College
2578 E. 350th Road
Oglesby, IL 61348-1099

Send poetry to:
Thomas Kent
Chair, Department of English
Bradley University
Peoria, IL 61625

Send all manuscripts by first-class mail.

REQUIRED ENCLOSURE:

When submitting manuscripts, include a signed statement to read:

To the best of my knowledge the enclosed manuscripts were written by the students whose names they bear. I have submitted work by the following: (Give complete list of students represented)

Doe, John	"Sunrise" (poem)	7th
(name)	(title)	(grade)

_____

_____

_____
(Teacher's Signature)

MANUSCRIPTS MUST BE SENT FIRST-CLASS
POSTMARK NO LATER THAN JANUARY 31, 1987
NO MANUSCRIPTS WILL BE RETURNED.